Original/Duplicate/Triplicate

P.W.G. 17 — 1st and part Bill — **CONTRACT CERTIFICATE** — Reference paras 158 & 170

NO

Division **Yelahanka** Sub division **Yelahanka New Town** Date

Bills received No Date Sub-divisional Cash book vr No

Divisional Date

Sheduled Docket No Head of account

Name of work(as per sanctioned estimate) :-

Work Code:003-20-000086

Name of Work: Improvements to Roads and Drains and other developmental works in Attur Ward No-03 Under Road Development head in Chief Minister Navanagaraothana of Yelahanka Division (Package -02)

Name of contractor and full address :-

Sri M.S. Venkatesh, M/s MSV Construction and Company No,163, 5th Cross, 2nd Main Road, Prakashanagara Bangalore-560021

Reference to agreement No :- BBMP/EE/YNK.D/EPMT-12/AG/09/2020-21

Estimated cost : 14.00 Cr

Work order No :BBMP/EE/YNK.D/EPMT-12/W.O/14/2020-21 Dt 14.05.2020

Certified that the measurments were taken by me on 25/11/2021 and recorded on pages _____ to _____ of measurment book No _____ and the work is satisfactorily executed by the contractor.

Signature of contractor 25/11/2021 Asst. Engineer

Certified that the measurments were taken by me on and recorded correct.The work is satisfactorily executed.
Certified that the quantities of materials shown in column 3 of account II have been actualy brought to site of work and the contractor has not previously received any advance on this security. These materials are of any imperishable nature and are all required by the contractor for immidiate use on the work in connection with items for which rates finished work have been agreed upon.A formal agreement signed and executed by the contractor is recorded in divisional office.

Sub divisional officer

II MEMORANDUM OF PAYMENT

1) Total value of work done or supplies as per A/c within		
2) Deduct amount to be held in reserve being-----percent Rs----------%--------		
3) Balance---		
4) Deduct payments		
a) Amount of previous payment as in divisional/sub divisional cash book vr No----------dated----------S.D No----------Amount adjusted		
b) Cost of payments/stores or other materials supplied now made recovery of Amount paid on this bill by cheque/cash		
Total		
5). Balance being unpaid value of work done held in reserve		
6) Deduct cash of advance made on divisional/sub divisional cash book		
7) Net amount due to or from contractor.		
UN ADJUSTED ITEMS		
8) Advance to contractor for materials to site(as detailed within)		
9) Value of government materials supplied.		
TOTAL AMOUNT UN-ADJUSTED		

Contractor's signatures

Received Rs----------(in words)----------

For use in the Executive Engineer's office----------

of payment as per memorandum

(in final settlement of all demand)

Witness

1)

2)

Reciept Stamp

Dated signature of contractor

paid by me cheque No dated

Cash Rs.

Date Initials of officer making payment Date Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Improvements to Roads and Drains and other developmental works in Attur Ward No-03 Under Road Development head in Chief Minister Navanagaraothana of Yelahanka Division (Package -02)

ABSTRACT

Sl No	Description of Work	Unit	As per Schedule -B			Previous Measurement		Present Measurement			Up to date	
			Qty	Rate	Amount	Qty	Amount	Qty	Rate in Rs.	Amount	Qty	Amount
1	KSRRB 200-8 Clearing and grubbing road land including uprooting rank vegetation grass bushes shrubs and trees of girth upto 300mm by manual means in area of lights jungles removal of stumps disposal of unservicable materials stacking of servicable materials labour charges complete as per specification	Sqm	1213.37	11.13	13504.81	-	-	1213.37	11.13	13504.81	1213.37	13504.81
2	KSRRB 300-49 scarifying bituminous course 50mm to 75mm thick along with premix carpet I surface dressing by manual means without disturbing the base and stacking of the debris materials including cost of all labours charges complete as per specification MORTH I Chapter 3	Sqm	28672.40	100.17	2872114.31	-	-	28672.40	100.17	2872114.31	28672.40	2872114.31
3	KSRRB 300-45. Scarifying stone metal crust 50mm to 100mm thick with pick axels along with pre mix carpet/ surface dressing and stacking of old servicable materials by manual means including of cost of labours charges complete as per specification. MORTH I Chapter 3	Sqm	0.00	89.04	0.00	-	-	0.00	89.04	0.00	0.00	0.00
4	KSRRB M300-59.2. Loosening levelling and compacting original ground supporting embackment to facilitate placement of first layer of embackment / subgrade scarified to a depth of 150mm mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in table 300-2 for embackment/ subgrade including HOM construction , labour etc., complete as per specification. MORTH specification No. 305.3.4	Sqm	52084.45	25.60	1333361.92	-	-	50943.64	25.60	1304157.18	50943.64	1304157.18
5	KSRRB M300-14 Excavation for roadswork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom ans side slopes, in accordance with requirement of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete	Cum	14107.40	45.63	643720.66	-	-	12731.99	45.63	580960.65	12731.99	580960.65
6	KSRRB M300-19 Removal of unservicable soil including excavation , loading and disposal but excluding replacement by suitable soil which shall be paid seperately as per clause 300.5 complete as per specifications. MORTH specification No.301	Cum	14107.40	36.73	518164.80	-	-	12730.31	36.73	467584.25	12730.31	467584.25

Contractor

Consultants

Assistant Engineer

Assistant Executive Engineer

7	Construction of granular sub-base Grading-v as sub-base and drainage layer by providing coarse graded crushed stone aggregates of granitr/trap/basalt materials, mixing by mix in place method by rotavatory at OMC spreading in uniform layers with motor grader on prepared surface and compacting with vibrator power roller to achieve the 98% proctor density, complete as per specifications. Clause 401 of MORTH V revision.	Cum	7731.69	1947.75	15059399.20	-	-	7731.69	1947.75	15059407.96	7731.69	15059407.96
8	KSRRB M400-17 Proving, laying, spreading and compacting crushed stone aggregates of granite/trap/basalt to wetmix macadam specifications including pre mixing the materials with water at OMC in mechanical mix plant carriage of mixed materials by tippers to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory rollers to achieve the desired density complete as per specifications. MORTH specification No. 406	Cum	13802.91	2101.34	29004606.90	-	-	12569.41	2101.34	26412604.01	12569.41	26412604.01
9	KSRRB 500-2 Cleaning the existing black topped surface with brooms soft brush and finallydusting with old gunny bags and /or compressed air to achieve bituminous treatment including cost of all materials. Labour, HOM of mechanical complete as per specifications MORTH specifications clause 501	Sqm	18325.05	5.56	101887.28	-	-	13190.05	5.56	73336.68	13190.05	73336.68
10	KSRRB M500-6 providing and applying prime coat with s.s bituminous emulsion on prepared surface of granular base such as WMM including cleaning of roads surface and spraying primer at the rate of 0.60 kg per sqm using mechanical means complete as per specifications MORTH specifications No. 502	Sqm	51544.63	35.62	1836019.72	-	-	48774.08	35.62	1737332.73	48774.08	1737332.73
11	KSRRB 500-7 Providing and applying tack coat using 80/100 grade bitumen (VG10) on the prepared black topped surface at 0.25 kg per sqm heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials labour HOM of machineries complete as per specifications MORTH Chapter 5	Sqm	60636.52	13.36	810103.91	-	-	55910.51	13.36	746964.41	55910.51	746964.41

Contractor

Consultants

Assistant Engineer

Assistant Executive Engineer

12	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, lavel and allignment, rolling with smooth wheeled, vibratory and tandom rollers to achieve the desired compaction as per MORTH table 500-10 Complete in all respects compete as per specifications MORTH specification No. 507. using 100/120 TPH capacity HMP with sensor paver Gr II (50mm to 75mm) with 4.5 % VG-30 Bitumen.	Cum	2633.14	8001.36	21068701.07	-	-	2448.36	8001.36	19590201.77	2448.36	19590201.77
13	providing and laying bituminous concrete 40mm thick with hot mix plant, using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminious binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and o.43% of plastomeric thermoplastic(waste plastic) crushed aggregates of specified grading pre mixxed with bituminous binder and filler, transporting the hot mix to the work site, laying with a paver finisher to the require grade, level and allignment and rolling with the smooth wheeled, vibratory and tandom rollers to achieve the desired compaction in all respect complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. KPWD S.R 2018-19 It No. 21.78.12 Pg	Cum	2425.46	9134.39	22155097.57	-	-	2236.42	9134.39	20428336.14	2236.42	20428336.14
14	Providing and Constructing dry lean cement concrete mix CC1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregates at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregatesconforming to IS: 383-2016, aggregates gradation after blending to be as per table 600-1 optimum moisture content to be determined during trial length construction concrete strength not to be less tham 10Mpa at 7 days mixed in a batch mixer plant transportated to site, laid with a paver, compacting with 8-10 tonnes vibratory roller	Cum	105.71	3990.10	421793.47	-	-	105.71	3990.10	421803.45	105.71	421803.45

Contractor

Material Test House Pvt Ltd Karnataka

Consultants

Assistant Engineer

Assistant Executive Engineer

15	Constructing Un-reinforced plain cement concrete for pavements using grade concrete M30 over a prepared base with OPC coarse aggregates at 0.69Cum fine aggregates at 0.46cum coarse and fine aggregates conforming to IS: 383-2016, with superplastisizer at 3 its conforming to IS: 9103-2008 mixed in a concrete mixer of not less than 0.6cum capacity and appropriate weight batcher as per approved mix design laid in approved fixed side form work and spreading the concrete with shovels, rackers compacted using needles screed and plate vibrator and finished with floaters in a contineous operation including provision of contraction and cover the surface by gunny bags for curing.	Cum	140.95	5471.51	771209.33	-	-	140.95	5471.51	771209.33	140.95	771209.33
16	KSRRB M800-35. Supply and installation of molded shank raised pavment markers made up of poly carbonate and ABS (acrylonitrile Butadiene styrene) molded body and reflective pannels with microprismatic lens capable of providing total internal reflection of the light entering the lense face and shall support load of 16000 KG tested in accordance to specifications of catagory A of MORTH circular No. RW/NH/33023/10-97 - DO III Dt 11.06.1997. the height width and length shall not exceed 50mm, 100mm and 102mm and with minimum reflective area of 13Sqcm on each side and the slope to the base shall be 35o the strength of detachment of the intergated cylindrical shanks (of diameter not less than 19mm and height not less than 30mm) from the body is to be a minimum value of 500KG. fixing will be by drilling hole on the road for the shanks to go inside, with out nails and using Epoxy resin based adhesive as per manufacuter recommendations and complete as directed by the engineer	No's	2999.00	375.08	1124864.92	-	-	2721	375.08	1020485.51	2720.71	1020485.51
17	KSRRB M800-13. Road marking with hot applied thermoplastic compound with reflectrising glass beads on bituminous surface / concrete surface : providing and laying of hot applied thermo plastic compound 2.5mm thick including reflectorising glass beads at 250gms per sqm area thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35 standards specified.complete as per specifications.	Sqm	3673.43	477.48	1753989.36	-	-	3388.66	477.48	1618014.99	3388.66	1618014.99
18	KSRB 15-19.1: Providing and applying ready mix priming coat over concrete/ Masonry/Asbestors cement sheet / plastered surface including preparing the surface after thoroughly cleaning of oil greese dirt and other foreign matter and sand papering including cost of all materials labour complete as per specifications.	Sqm	0.00	41.18	0.00	-	-	0.00	41.18	0.00	0.00	0.00

Contractor

Consultants

Assistant Engineer

Assistant Executive Engineer

19	KSRB 15-19.2: Providing and applying spray paintingover concrete/ masonry/asbestors cement sheet/ plastered surface with flatwall paint of approved brand to gave even shade after cleaning the surface of all dirt dust and other foreign matter and sand papering including cost of all materials labour, complete as per specification	Sqm	0.00	61.22	0.00	-	-	0.00	61.22	0.00	0.00	0.00
20	supplyand fixing of retro reflective single Arrow road name signboard of size 1600mmX900mm made out of retro reflective sheetingconforming to type XI standard of ASTM D 4956-09 & as per IRC 67-2012 Forfull back ground of blue colour & white lettered and fixed over 4mm thick aluminium composite material sheet having minium 0.5mm thick alluminium skin on both side with back side painted gray colour and fixed over support frame SS Angle 15mmX20mmX1.2mm complete as per direction of engineer in charge.	Sqm	0.00	14799.56	0.00	-	-	0.00	14799.56	0.00	0.00	0.00
21	Supply and fixing of medium duty SFRC Frame and cover confirming to IS 12592 (part-1)-1988 and IS 12592(Part-2)-1991 with latest amendment including cutting slab to the required size for the opening and fixing the cover in CC 1:2:4 and CM 1:3 plastering 20mm thick to all exposed faces, curing for 10 days with all leads and lift ETC., complete	Sqm	0.00	2313.93	0.00	-	-	0.00	2313.93	0.00	0.00	0.00
22	providing and laying plain/reinforced cement concrete foe drain walls and bottom thickness 15cm using M20 nominal mix concrete with OPC at 300kgs. With 20mm and down size granite metal coarse aggregates at 0.69cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centring, shuttering, cost of materials, HOM of machinery, curing etc., completed as per specification.	Cum	0.00	7637.41	0.00	-	-	0.00	7637.41	0.00	0.00	0.00
23	KSRRB M100-1 Loading and unloading of stone boulder I stone aggregates IS and/ Kankar J Moorum. KSRRB M100-1: Placing tipper at loading point, loading with front end loader, dumping, turning for return trip Excluding time for haulage and return trip complete as per specfication. MORTH-100/Chapter 1.	Cum	0.00	63.44	0.00	-	-	0.00	63.44	0.00	0.00	0.00
24	KSRRB M100-4.1. Cost of haulage excluding loading and unloading MORTH-100/Chapter 1 Case 1: Surface road	t.Km	0.00	2.23	0.00	-	-	0.00	2.23	0.00	0.00	0.00
25	KSRRB M2900-1. Plain cement concrete M10 mix with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing including cost of materials, labour, HOM completed as per specifications	Cum	129.10	4703.54	607227.01	-	-	53.25	4703.54	250463.51	53.25	250463.51

Contractor

Consultants

Assistant Engineer

Assistant Executive Engineer

26	Providining & fixing precaste solid concrete kerb stones of size 450X200X400mm maid out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting etc., complete.	No's	4256.85	454.10	1933035.59	-	-	0.00	454.10	0.00	0.00	0.00
27	Removing and Resetting of Kerb Stones	M	0.00	110.19	0.00	-	-	0.00	110.19	0.00	0.00	0.00
28	KSRRB 800-1 Painting two coats after filling surface with synthetic enamel paint in approved shades on new plastered concrete surface with materials, labour complete as per specifications.	Sqm	862.88	89.04	76830.84	-	-	0.00	89.04	0.00	0.00	0.00
29	KSRB 14.6-1 : Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks od approved size, shape and colour with a minimum compressive strength of 281kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specification.	Sqm	8092.56	1171.99	9484399.39	-	-	3070.44	1171.99	3598524.98	3070.44	3598524.98
30	Dismantelling/ removing and resetting of footpath slabs	Sqm	5250.70	219.26	1151268.48	-	-	1078.68	219.26	236511.38	1078.68	236511.38
31	KSRRB300-1. Earthwork excavation by manual means for Drains and similar works in ordinar soil excavated surface levelled and sides neatly dressed, the dispossed earth to be levelled neatly after breaking of clods completed as per specifications. KPWD S.R 2018-19.	Cum	1458.45	144.69	211023.13	-	-	53.25	144.69	7704.74	53.25	7704.74
32	KSRRB M2200-6. Providing TMT Bars Fe 500 steel reinforcement for RCC work including Straightening, cutting, bending, hooking, placing in position, lapping and/or welding whereever required, tying with binding wire and anchoring to the adjoining members whereever necessary completed as per design ans specification.	tonnes	5.45	75943.33	413891.15	-	-	1.40	75943.33	106138.98	1.40	106138.98
33	providing and laying plain/reinforced cement concrete foe drain walls and bottom thickness 15cm using M20 nominal mix concrete with OPC at 300kgs. With 20mm and down size granite metal coarse aggregates at 0.69cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centring, shuttering, cost of materials, HOM of machinery, curing etc., completed as per specification.	Cum	175.00	7423.71	1299149.25	-	-	25.03	7423.71	185796.90	25.03	185796.90
34	providing and fixing precast reinforced concrete slab 10cm thick of mix M20 using 20mm and down size graded granite metal using reinforcement 10mm dia steel at 150mm C/c both ways.	Sqm	2943.78	2453.85	7223594.55	-	-	0.00	2453.85	0.00	0.00	0.00

Contractor

Consultants

Assistant Engineer

Assistant Executive Engineer

35	Provoding and laying Precast Drain cover slabs of 250mm thick of mix M20 using graded granite jelly 20mm & downsize with steel reinforcement complete as per specification.	Sqm	196.35	5688.90	1117015.52	-	-	53.25	5688.90	302933.93	53.25	302933.93
36	Removing and resetting of Stone slabs of draina and pointing in C:M 1:3	Sqm	291.24	110.25	32109.21	-	-	0.00	110.25	0.00	0.00	0.00
37	KSRRB M200-15.1 Dismantelling of Existing Structures like culverts bridges retaining wall and other structures comprising of masonry cement concrete wood work Etc., Complete as per specifications.	Cum	14.20	321.66	4567.57	-	-	14.20	321.66	4567.57	14.20	4567.57
38	KSRRB M200-26 Dismantelling kerb stones by manual means and disposal of dismanteled materials with all lifts and complete as per specification MORTH specification No.202	M	0.00	13.36	0.00	-	-	0.00	13.36	0.00	0.00	0.00
39	KSRRB M200-24 Dismantelling of cement concrete pavement by mechanical means using pneumatic tools breaking to pieces not excluding 0.02 Cum in Volume and stock piling at dismanteled location and disposal of dismanteled materials stackling servicable and unservicable materials seperate complete as per specifications MORTH Specification No.202	Cum	412.23	1000.59	412473.22	-	-	412.23	1000.59	412476.22	412.23	412476.22
	Total				**123454989.05**					**98223136.38**		**98223136.38**
	12% GST				**14814598.69**					**11786776.37**		**11786776.37**
	Grand Total				**138269587.74**					**110009912.75**		**110009912.75**

CERTIFICATE

1 Certified that the work done is satisfactorily.

2 There is no departmental issues by BBMP

Contractor

Assistant Engineer

Material Test House Pvt Ltd Consultants

Asst. Executive Engineer